

HAY

ON

Harmonious Colouring.

THIRD EDITION.

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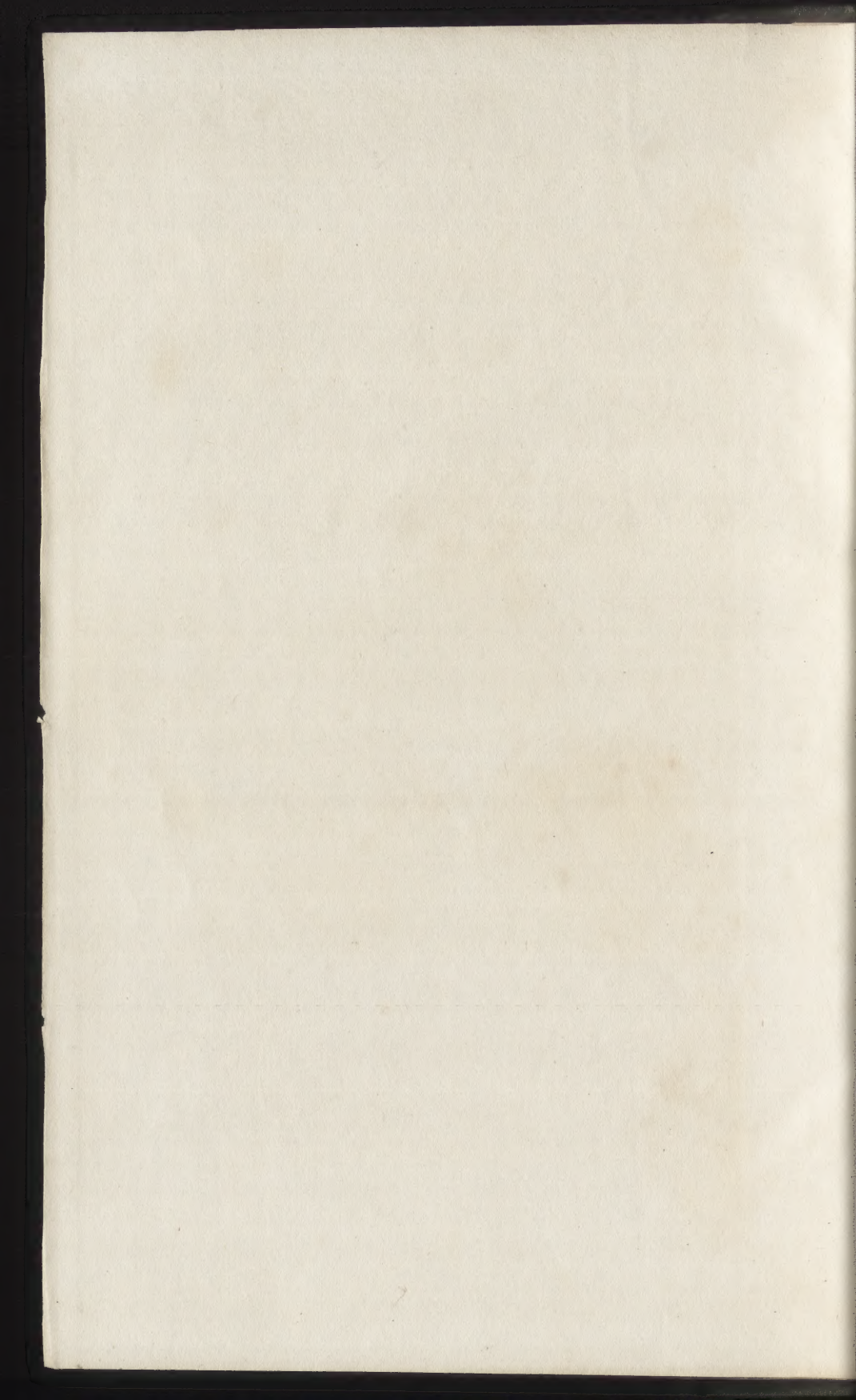
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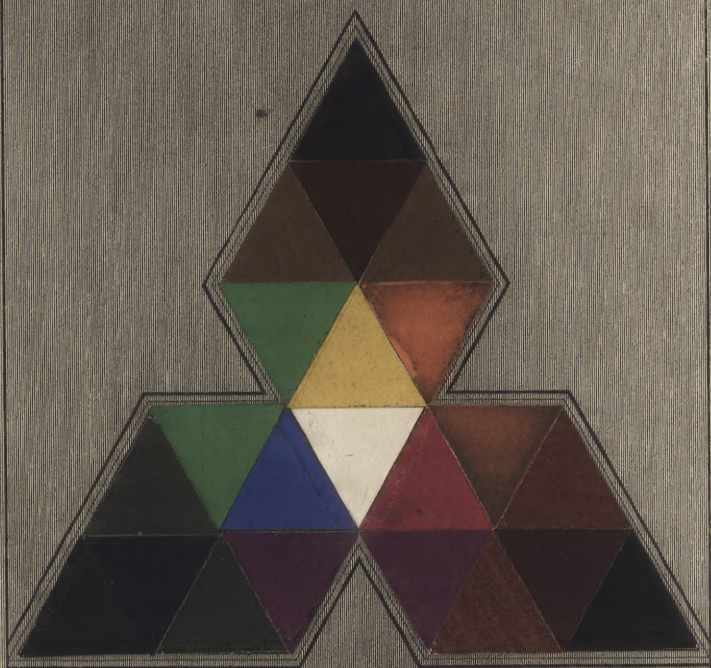
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EXAMPLE II.



THE
LAWS OF
HARMONIOUS COLOURING,

ADAPTED TO

INTERIOR DECORATIONS, MANUFACTURES,
AND OTHER USEFUL PURPOSES.

By D. R. HAY,
HOUSE PAINTER, EDINBURGH.

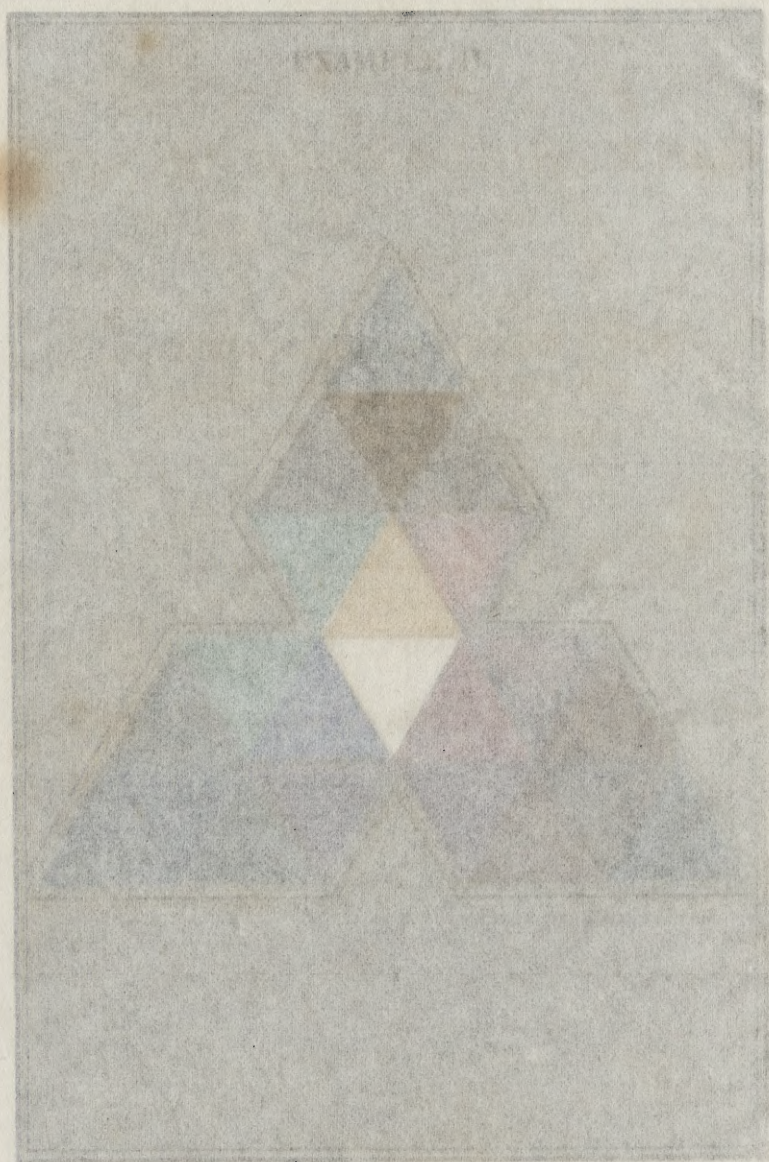
"Every opportunity should be taken to discountenance that false and vulgar opinion, that rules are the fetters of genius: they are fetters only to men of no genius." — SIR JOSHUA REYNOLDS.

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EDINBURGH:
WILLIAM AND ROBERT CHAMBERS;
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1836.

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EDINBURGH PRINTING COMPANY,
Shakspeare Square.

TO THE HONOURABLE
THE
MEMBERS OF THE BOARD OF TRUSTEES
FOR THE
ENCOURAGEMENT OF MANUFACTURES IN SCOTLAND,
THIS TREATISE
IS RESPECTFULLY DEDICATED BY
THEIR MUCH OBLIGED,
AND VERY HUMBLE SERVANT,
THE AUTHOR.

89, GEORGE STREET,
February 15, 1836.



INTRODUCTION.

IN the two former editions of this treatise, I merely endeavoured to adapt the laws of harmonious colouring to interior decoration. In this edition, however, I have given such a general view of those laws as, I trust, may be useful in all cases where various colours are necessarily brought together; whether in decoration, manufacture, dress, planting of flowers, or in other ordinary matters. Independently of such applications, however, I do not hesitate to say that a knowledge of these laws will enhance the pleasure derived from viewing the beauties, not only of pictorial art, but of Nature herself, in so far as that knowledge is calculated to cultivate and improve the perception.

The error of considering the arranging of colours as a matter of taste merely, is very prevalent. Mere matters of taste, however, are subjects upon which both nations and individuals differ widely, and there are no productions

of this kind, however extravagant or absurd, that have not their admirers, while they bear the gloss of novelty or stamp of fashion. Such matters are subject to no rule whatsoever—they are governed entirely by caprice; but it is very different with the arranging of colours, for that is regulated by laws, founded on natural principles. There are, no doubt, many varieties of tastes in regard to colours, both individually and arranged. Many have fancies for, and antipathies to, particular hues. All have their tastes in regard to particular styles of colouring; some being fond of the gay and lively; some the rich and powerful, and others the deep and grave. Some have a partiality for complex arrangements, while others prefer extreme simplicity. But this is the case in music also; every variety and style of composition has its particular admirers; yet it never is assumed from this, that the arranging of the notes in a melody, or other musical composition, is a mere matter of taste. All know that the arrangement of notes in such cases is regulated by fixed laws, which cannot be deviated from without giving offence to the ear; and that a knowledge of these laws is absolutely requisite to every one who wishes

to cultivate that pleasing art. It does not matter under what circumstances a variety of colours is presented to the eye; if they be harmoniously arranged, the effect will be as agreeable to that organ as harmonious music to the ear;—but if not so arranged, the effect on the eye must be unpleasant; and the more cultivated the mind of the individual, the more annoying will such discordance be. These facts I have endeavoured to make apparent, by drawing an analogy between the science of colour and that of sound.

From circumstances which I have elsewhere explained, I have added a few observations on the application of the arts generally to our manufactures, which I trust will be found of some practical utility.

ERRATUM.

Page 31, line 5 from bottom, for *quality* read *quantity*.

THE LAWS
OF
HARMONIOUS COLOURING.

THE laws of harmonious colouring seem not only to have been thoroughly understood by those great painters of antiquity, whose works have been the admiration and study of succeeding ages, but were, even so far back as amongst the early Egyptians, carried to the greatest perfection in the more humble, though equally useful, art of internal decoration. Those travellers who have visited the remains of the magnificent cities and tombs erected by that wonderful people, speak of this branch of art as having been executed upon an evidently regular system of harmony, which had for its basis those laws that still continue to be the study of followers of the highest walks of art.

The Romans, too, at the period of their greatest refinement, seem to have applied this science to the useful arts. Of this the remains of Pompeii and Herculaneum afford ample proof. Such artists and ama-

teurs as have visited those interesting ruins, and whom I have had an opportunity of consulting upon the subject, speak in the highest terms of the scientific manner in which the colours are arranged in the decoration even of the most ordinary dwellings. According to these accounts, and judging from many coloured sketches made upon the spot, with the sight of which I have been favoured, it appears to me that the knowledge of colour possessed by the Romans at that period must have been of the most scientific nature.* They used upon all occasions the most brilliant and intense colours, without either discord or crudity resulting from their various combinations.

Even at this day the Italians seem to surpass us in this particular. An eminent writer on the art of painting, and one who has of late years done much in an official capacity for the encouragement and improvement of our national manufactures, attributes the inexpressibly pleasing effect of the mode of house-painting practised by the modern Italians to their knowledge of, and attention to, the rules of harmony alone; and observes, that their bold and vivid tints melt into each other with all the skill and harmony of a piece of brilliant music.

Harmony of colouring is, at the present period, evi-

* The best sketches of this kind that I have seen were by Charles H. Wilson, Esq., who visited those ruins professionally. These, I believe, he intends publishing, in a series of coloured etchings, as soon as he has completed the beautiful series of exterior views upon which he is at present engaged.

dently becoming one of the characteristics of our national school of painting; and this will no doubt eventually lead to a knowledge of it amongst the more humble class of colourists to which I belong. Yet I consider it a necessary step towards the attainment of this knowledge, that the simple rules or groundwork of the art should be disseminated amongst us in a popular form.

With these views, but confining myself to an application of those rules to my own humble profession, I published this little treatise. The success of the first and second editions, my experience since, and, above all, the study of Field's scientific and excellent works on chromatics, have induced and enabled me, not only to remodel and, I trust, greatly improve the present edition, but to extend its usefulness, by adapting it to variously-coloured manufactures, and indeed to every case where colours are brought together to produce effect.

Harmonious arrangements of colours being such combinations as, by certain principles of our nature, produce an effect on the eye similar to that which is produced by harmonious music on the ear, and as a remarkable conformity exists between the science of colour and that of sound, in their fundamental principles as well as in their effects, I shall probably best pave the way to a proper comprehension of the former by tracing this analogy, the more especially as the science of music is so much more generally understood. This analogy will help to show, that the laws

which govern colour are as irrefragable, and, at the same time, as practically necessary to the colourist, in art, manufacture, or decoration, as those which govern sound are to the musician.

I believe it will be generally acknowledged by judges of such matters, that the dresses of most ladies of the highly-educated class are arranged with an apparent adherence to the laws of harmonious colouring. This, I have no doubt, arises from their knowledge of music, as well as from the improved perception consequent upon a general cultivation of the mind. Field makes an observation, the truth of which will be pretty generally admitted; he says "that the female eye seems to be particularly receptive and perceptive of the tender, beautiful, and expressive relations of colours." This must no doubt assist the other facilities I have alluded to.

Before entering upon this part of my subject, however, it will be requisite to give a short account of the theories of colour.

When I first published this treatise there existed two theories, and I hesitated long which of the two to adopt. The one theory was that established by Sir Isaac Newton, and adopted by Sir David Brewster, and other philosophical writers on chromatics. A short account of it may make what follows more clearly understood by the generality of readers. It was discovered or confirmed by Sir Isaac Newton in the following manner:—

In the window-shutter of a darkened room he made a hole of about the third of an inch diameter, behind which, at a short distance, he placed a prism, so that a ray of the sun's light might enter, and leave it at equal angles. This ray, which before the introduction of the prism proceeded in a straight line, and formed a round spot upon a screen placed a few feet distant from the window, was now found to be refracted, appeared of an oblong form, and composed of seven different colours of the greatest brilliancy, imperceptibly blended together, viz. violet, indigo, blue, green, yellow, orange, and red. This is called the solar or prismatic spectrum.

The theory established by this experiment was, that the white light of the sun is composed of several colours, which often appear by themselves, and that this white light can be separated into its elements.

By making a hole in the screen upon which the spectrum is formed, opposite to each of these colours successively, so as to allow it alone to pass, and by letting the colour thus separated fall upon a second prism, Sir Isaac found that the light of each of the colours was alike refrangible, because the second prism could not separate it into an oblong image, or any other colour; hence, he called all the colours simple or homogeneous.

The other theory was that which seemed adopted by almost all who had written on colouring connected with the fine arts, and was, that there were only three

simple or homogeneous colours, and that all others resulted from them. Although this theory was not set up in opposition to that of the natural philosophers, but seemed only to be established in a practical point of view, neither was it supported by any scientific experiments; yet it appeared to me more consistent with the general simplicity of nature, and I could not believe that she required seven homogeneous parts to produce what art could do by three. For instance, an artist could make all the colours, and indeed a correct representation of the prismatic spectrum (so far as the purity of his materials would allow), with three colours only; while, according to the theory of Sir Isaac Newton, seven simple or homogeneous colours were employed to produce the real one.* The following discovery, made by Buffon, and illustrated by succeeding philosophers, helped to strengthen me in the conviction, that the scientific theory might, like that of the practical artist, be reducible to three simple or homogeneous parts.

If we look steadily for a considerable time upon a spot of any given colour, placed on a white or black ground, it will appear surrounded by a border of another colour. And this colour will uniformly be found to be that which makes up the triad; for if the

* A similar view of the nature of the prismatic colours, as I have recently learned, was communicated by Dr Milner to Humphrey Repton, the celebrated landscape gardener, in the year 1802, published in his essay on that subject, and afterwards quoted by Clark in his *Progressive Lessons on Landscape Painting*, 1816.

spot be red, the border will be green, which is composed of blue and yellow; if blue, the border will be orange, composed of yellow and red; and if yellow, the border will be purple, making in all cases a trinity of the three colours called by artists homogeneous.

With a view to throw such light upon the subject as my limited opportunities would permit, I went over the experiments by which Sir Isaac Newton established his theory, and the same results occurred: I could not separate any one colour of the solar spectrum into two. The imperceptible manner in which the colours were blended together upon the spectrum, however, and the circumstance of the colours, which practical people call compound, being always placed at the adjunct of the two of which they say it is composed, with my previous conviction, induced me to continue my experiments; and although I could not, by analysis, prove that there were only three colours, I succeeded in proving it to my own satisfaction synthetically, in the following manner:

After having tried every colour in succession, and finding that none of them could be separated into two, I next made a hole in the first screen in the centre of the blue of the spectrum, and another in that of the red. I had thereby a spot of each of these colours upon a second screen. I then, by means of another prism, directed the blue spot to the same part of the second screen on which the red appeared, where they

united and produced a violet as pure and intense as that upon the spectrum. I did the same with the blue and yellow, and produced the prismatic green; as also with the red and yellow, and orange was the result. I tried, in the same manner, to mix a simple with what I thought a compound colour, but they did not unite; for no sooner was the red spot thrown upon the green than it disappeared.

I tried the same experiment with two spectrums, the one behind, and of course a little above the other, and passed a spot of each colour successively over the spectrum which was farthest from the window, and the same result occurred. It therefore appeared to me that these three colours had an affinity to one another that did not exist in the others, and that they could not be the same in every respect, except colour and refrangibility, as had hitherto been taught.

These opinions and experiments I published in 1828, as being a necessary part of a treatise of this nature, and I did so with great diffidence, well knowing that I was soaring far above my own element in making an attempt to throw light upon such a subject.

I had, however, the gratification to learn that "there was read on the 21st of March 1831, at the Royal Society of Edinburgh, a communication from Sir David Brewster, containing a new analysis of white solar light. He showed that it consists of the three primary colours, red, yellow, and blue; and that the

other colours shown by the prism are also composed of these."—*Atlas*, April 10, 1831.

I may, therefore, in this edition of my treatise, confidently assume that there are only three primary homogeneous colours in nature.

It is well known to all who have studied music that there are three fundamental notes, viz. C, E, and G, which compose the common chord, or harmonic triad, and that they are the foundation of all harmony. So also there are three fundamental colours, the lowest number capable of uniting in variety, harmony, or system.

By the combination of any two of these primary colours, a secondary colour of a distinct kind is produced; and as only one absolutely distinct denomination of colour can arise from a combination of the three primaries, the full number of really distinct colours is seven, corresponding to the seven notes in the complete scale of the musician. Each of these colours is capable of forming an *archeus*, or key, for an arrangement, to which all the other colours introduced must refer subordinately. This reference and subordination to one particular colour, as is the case in regard to the key note in musical composition, gives a character to the whole.

This characteristic of an arrangement of colour is generally called its tone; but it appears to me that this term is more applicable to individual hues, as it is in music to voices and instruments alone. Yet, to

avoid obscurity, I shall continue to use it in the sense in which it is generally applied to colouring.

From the three primary colours, as will be afterwards shown, arise an infinite variety of hues, tints, and shades, so that the colourist, like the musician, notwithstanding the extreme simplicity of the fundamental principles upon which his art is built, has ample scope for the production of originality and beauty, in the various combinations and arrangements of his materials.

The three homogeneous colours, yellow, red, and blue, have been proved by Field, in the most satisfactory manner, to be in numerical proportional power as follows—yellow three, red five, and blue eight.

When these three colours are reflected from any opaque body in these proportions, white is produced. They are then in an active state, but each is neutralised by the relative effect that the others have upon it. When they are absorbed in the same proportions, they are in a passive state, and black is the result. When transmitted through any transparent body, the effect is the same; but in the first case they are material or inherent, and in the second impalpable or transient. Colour therefore depends entirely on the reflective or refractive power of bodies, as the transmission or reflection of sound does upon their vibratory powers.

From the combination of the primary colours the secondary arise, and are orange, which is composed of yellow and red, in the proportion of three and five ;

purple, which is composed of red and blue, in the proportion of five and eight; and green, composed of yellow and blue, in the proportion of three and eight. These are called the accidental or contrasting colours to the primaries, with which they produce harmony in opposition, in the same manner in which it is effected in music by accompaniment; the orange with the blue, the purple with the yellow, and the green with the red. They are therefore concords in the musical relation of fourths, neutralising each other at sixteen.

This neutralising or compensating power, as will be afterwards shown, is the foundation of all agreement and harmony amongst colours, and upon it depends also the brilliancy and force of every composition.

From the combination of these secondaries arise the tertiaries, which are also three in number, as follow: olive from the mixture of the purple and green, citron from the mixture of the green and orange, and russet from the mixture of the orange and purple. These three colours, however, like the compounds produced by their admixture, may be reckoned under the general denomination of neutral hues, as they are all formed by a mixture of the same ingredients; the three primaries, which always, less or more, neutralize each other in triunity. The most neutral of them all being grey, the mean between black and white, as any of the secondaries are between two of the primaries, it may appropriately be termed the seventh colour. These tertiaries, however, stand in the same relation to the

secondaries that the secondaries do to the primaries—olive to orange, citron to purple, and russet to green; and their proportion will be found to be in the same accordance, and neutralising each other integrally as 32.

Out of the tertiaries arise a series of other colours, such as brown, marone, slate, &c. in an incalculable gradation, until they arrive at a perfect neutrality in black, as shown in diagram 2. To all of these the same rules of contrast are equally applicable.

Besides this relation of contrast in opposition, colours have a relation in series, which is their melody. This melody, or harmony of succession, is found in all the natural phenomena of colour. Each colour on the prismatic spectrum, and in the rainbow, is melodised by the two compounds which it forms with the other two primaries. For instance, the yellow is melodised by the orange on the one side, and the green on the other; the blue by the green and purple, and the red by the purple and orange. Field, in his excellent *Essay on the Analogy and Harmony of Colours*,* has shown these coincidences by a diagram, in which he has accommodated the chromatic scale of the colourist to the diatonic series of the musician, shewing that the concords and discords are also singularly coincident. It is, however, too complex for a work of this simple kind; I shall therefore content myself by giving one of the three clefs only, as in the following example:—

* This is a work of the highest class of those adapted to the fine arts, and ought to be in the possession of every artist who wishes to approach perfection in colouring.



EXAMPLE I.



EXAMPLE 1

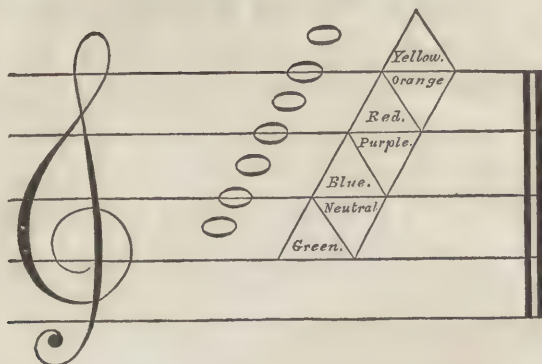


I shall conclude this part of the subject, making a closing comparison between the two last methods. The first method is the one I have usually seen in the books. I have represented the alterations themselves by Latin accents, which stand upon the notes, and the second method of representing color by ornaments and a brace. The first method is more compact, and the second is more expressive, and the second method is more easily understood by those who are not familiar with the first. The second method is more easily understood by those who are not familiar with the first. The second method is more easily understood by those who are not familiar with the first.

Thus, I shall leave all at this time.



EXAMPLE I.



I cannot conclude this part of my subject, without noticing a striking coincidence between colour and sound, which has not been referred to in any work that I have consulted upon the subject. I have already mentioned the phenomena discovered by Buffon, of the accidental colour which appears with any given colour, and that such accidental or compensating colour makes up the harmonious triad or concord. This, as I am informed by professors of music, is precisely the case when any given note is sounded on an instrument. It is always accompanied, or immediately succeeded, by those which form a chord, and are termed in music the harmonics. This phenomena, I believe, is most perceptible in the sound of a bell in succession, and in accompaniment on the string of the violincello.

Hitherto I have treated of all the colours, simple

and compound, as in their most perfect state of intensity or combination. I shall now show that they can be multiplied in tint and shade, as well as in hue, almost to infinity. By hue is meant any compound colour undiluted. The primary colours cannot be reckoned hues, because the introduction of any other colour will change their name. It is not so with the secondaries, for the subordination of either of their component parts will change their hue, while their names generally remain the same; hence arises an incalculable number of various hues of each of these colours—of orange from the yellowest to the reddest, of green from the yellowest to the bluest, and purple from the bluest to the reddest, with a few exceptions which shall be afterwards stated. In the same manner the tertiaries may be changed in hue to a much greater extent, by the predominance or subordination of any of their component parts, as also by the power of neutralisation, possessed by each of these parts upon the other two, as has already been noticed.

By tint is meant every gradation of a colour in lightness, from its most perfect or intense state up to white. This applies also to every one of the hues, for they are, as well as the colours, capable of every state of dilution.

The variety of tint is therefore incalculably greater than that of hue. By shade is meant every gradation of a colour or hue in depth, from its perfect state down to black.

In their contrasting powers, colours must bear relation to one another, in point of tint, hue, and shade. A tint of one colour, brought into an arrangement as a contrast or equivalent to a tint of another colour, ought to be equal in diluteness; and the same holds with colours receding from their original purity towards black. These contrasts are less and less powerful according to their state of dilution or shade. Black and white, however, as they form a perfect contrast to one another, being the extremes of light and shade, impart this quality to the colours with which they are combined. Therefore, as a shade recedes towards black in point of depth, the tint which is brought in as a perfect contrast to it ought to approach in an equal ratio towards white. All these equal contrasts of hues, tints, and shades with one another, can be easily performed by any one having a good eye, and a slight knowledge of their relations.

The other kind of contrasts, however, require particular study before any thing like perfection can be obtained, either in decorative colouring or that which is useful in manufacture, and are used, not in a neutralising or balancing point of view, but to give additional prominence, brilliancy, and effect to one particular colour. These contrasts may therefore be termed imperfect or unequal, because the one colour is to a certain extent neutralised or kept low in tone, in order to give its antagonist more intensity and clearness.

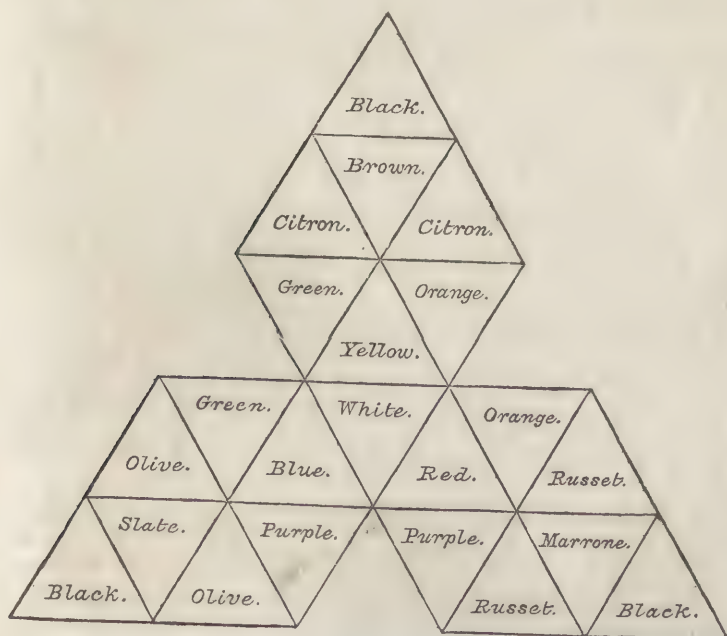
As the effect of every arrangement depends as much

on the media which accompany and unite them as on the colours themselves, the greatest attention ought to be paid to the tone and character of this class of colours. It is by adapting them properly that the greatest distinctions are reconciled and brought to an imperceptible adjunct; and it is by them that tone, keeping, and repose is given to the whole. A neglect of these mediatory colours is the chief cause of that crudity and confusion of parts, so conspicuous in many of the coloured goods manufactured at the present period.

In arranging colours, therefore, either in manufacture or decoration, whether a few or a great variety are to be employed, the effect of the whole, as well as the several component parts, will depend as much on attention to this as on the skill with which they are harmonised in contrast and succession to each other. And it must be borne in view, that no perfectly harmonious arrangement of colours can be made unless all the three primary colours be present, either in a simple or mixed state, and that the distinctions of harmony depend upon a predominance of one of these three.

The following diagram exhibits a general harmony of all the colours of any distinctive character, simple and compound, except the neutral grey, which is represented in the coloured copies, although imperfectly, by the engraved groundwork. It will be observed that each limb of this diagram forms a series of hues proceeding from one of the primaries, and producing a distinct melody or harmony, in succession, of that colour.

It will also be seen, that in each of these harmonies, although the primary colour or key-note predominates, the other two primaries enter, in combination, into the arrangement. This, however, shall be more plainly shown when these three melodies are exhibited separately. There is also shown, upon this diagram, the progress from light to darkness, or from white to black; as also in its nine central divisions, the harmony in succession, and contrast of the primary and secondary colours. The arrangement of this diagram, I trust, will likewise show that all the colours, in their greatest intensity, may be brought together without crudity or harshness:—



In all general arrangements of colours, which are not necessarily confined to any particular leading colour or (to continue the analogy) key-note, it ought to be kept in view, what nature has pointed out in the most distinct manner in all her colouring, namely, that those cool-toned and neutralised colours which are most agreeable to the eye should predominate, and that vivid and intense colours should, upon all occasions, be used with a sparing hand. The house-painter, in particular, should be aware that vivid colours are only employed to heighten the effect of splendour and richness, by their attractive qualities.

The manufacturer has a greater latitude, for his productions may, in most occasions, be neutralised by what accompanies them in a more general arrangement. In the finest specimens of Persian and Turkish carpets the deep tones of indigo and brown predominate, while the bright hues and tints only appear to detail and heighten the effect of the pattern.*

An eminent writer on the fine arts observes, that colouring, like sound in music or poetry, should be an echo to the sense; and according to the general sentiment which the subject should inspire, it will be gay, lively, sombre, or solemn. This ought likewise to be kept in view, not only in the colouring of the apart-

* This particular branch of manufactures has of late been brought to a degree of perfection by Mr Whytock of Edinburgh, probably unequalled in any other country in the world. Those who have seen his splendid productions, exhibited in the apartments of the Honourable the Board of Trustees, will be aware that I do not exaggerate the merits of his work by this statement.

ments of a dwelling-house, but in that of every building whatever. The same applies to every kind of coloured manufacture employed in decoration.

Every artist in the higher branches has a particular style of colouring to study, peculiarly adapted to the nature of the generality of his subjects; but the house-painter's styles must not only be as various as the uses of the apartments which he decorates, but must vary according to the different tastes of his employers. And farther, he must take into consideration not only the style of architecture, the situation, whether in town or country, but the very rays by which each apartment is lighted, whether they proceed directly from the sun, or are merely reflected from the northern sky. He must confine himself to neither a vivid, sombre, warm, nor cold style of colouring; all must be equally at his command, and in all the same strict attention to harmony must be observed.

The house-painter has often another very serious difficulty to encounter. A variety of highly and variously-coloured furniture is shown him, to which the colouring of the different parts of a room must be suited. It is here that his powers of balancing, harmonising, and uniting are called forth; it is this which obliges him, as Sir Joshua Reynolds says of the artist, ever to hold a balance in his hand, by which he must decide the value of different qualities, that, when some fault *must* be committed, he may choose the least.

In toning and harmonising the colours in a picture,

an artist has the assistance of light and shadow, and can make his shades accord with the tone in such a manner as to improve the general harmony; but as the colours of the house-painter and manufacturer are all liable to be placed in full light, they must be toned in themselves, to prevent that unnatural crudeness so annoying to the eye.* How, then, can we account for the prevalence of those gaudy paper hangings which impinge the most obtrusive rays in all their vigour, or those carpets where the preponderance of bright yellow and red, which are the more offensive from their receiving the rays of light more directly than any other part of the furniture, attracts the eye, and injures the effect of every thing which is placed upon them? And if, according to the rules which regulate the higher branches of the art, simplicity of arrangement prevents confusion where a variety of colours are introduced, the colours, on the generality of such articles, are most erroneously arranged. These errors must proceed from a general negligence of the rules of harmony. I do not mean by this that bright and vivid colours are always offensive. I have already said that they add richness and grandeur, when used in their proper places, and in proper quantities; but they should by no means cover the floor or walls of an apartment, unless under very peculiar circumstances. It

* In treating of this Burnet says, "We safely admit that the most brilliant colours will receive an advantage in being toned to those hues most common in nature, especially if they form a large mass in a picture."

may here be observed, that in all pictures representing interiors, when a group of figures is introduced, there may occasionally appear a piece of rich drapery or furniture, painted in equally vivid and bright colours with the figures, and which may in a great measure improve the general effect and harmony; but who ever saw, in a work of merit, the colours on the walls of the apartment, or carpet on the floor, making a monopoly of attraction, and causing those upon the figures and furniture to sink into insignificance?

There may be many excellences in a picture which may compensate for a defect in harmony, and the artist may still retain a high character for drawing, expression, &c.; but nothing can excuse a deficiency in this respect either in an apartment or a piece of manufacture. If the decorations are costly and gorgeous, the defect in harmony is more glaring.

I have asserted that a general negligence of the rules of harmony is the cause of our errors in decoration; and I have the authority of one of the first literary works of the age for this assertion.

In the article on house-painting, in the *Edinburgh Encyclopædia*, the author says, "It is in this essential point of harmony that our practice is particularly defective. We rarely see, in the simple painting of our apartments, any combination of colours that is not in some part offensive against even the common rules of art, although there are certain combinations pointed out by the laws of optics which can as little be made

to harmonise as two discordant notes in music. The unpleasant effects arising from such erroneous mixtures and juxtapositions we are often sufficiently aware of, without having the skill requisite to assign the reason, any more than the painter who chose them. We shall not exemplify the particular defects of harmony so conspicuous in our practice, as it would lead us into tedious details. We would only hint to our master painters that it is a matter requiring far greater study than they seem aware of."

The celebrated work from which I have taken the above statement might be a sufficient guarantee for its truth, but every one who has a knowledge of the laws which ought to govern an assemblage of different colours, must own that it is correct, even in regard to our most splendid habitations and palaces; the apartments in which, although often rendered pleasing from the interest excited by the profusion of pictures with which they are hung, too often display a want of harmony in their other decorations; and this does not always proceed from the painting alone, but often from a want of unison between it and the furniture; for each may be perfect in its own way, and yet the harshest discord exist between them.

As the author of the article quoted above declines exemplifying the particular defects in our practice, and as it seems to be a requisite part of this treatise, I shall endeavour to point out a few, with their causes.

The first and most obvious defect is, when there is

no particular tone or key fixed on for the colouring of an apartment, that is, when one part of the furniture is chosen without any reference to the rest, and the painting done without any reference to the furniture. This generally produces an incongruous mixture; and is, in comparison to a tastefully decorated apartment, as far as regards colouring, what a child produces with its first box of paints to the work of a great master.

A second, and more common fault, is the predominance of some bright and intense colour, either upon the walls or floor. It is evident that the predominance of a bright and overpowering colour upon so large a space as the floor or wall of a room, must injure the effect of the finest furniture.

This great error often arises from the difficulty of choosing a paper hanging or carpet, and our liability to be bewildered amongst the multitude of patterns which are produced; the most attractive of which, on a small scale, are often, from this very circumstance, the more objectionable, in regard to their forming a large mass in an apartment; particularly as the artists who design them seem to be regulated by no fixed principles, but, from their repeated deviations from the established rules of harmony, appear to give themselves up to the vague pursuit of novelty alone.

A third error is introducing deep and pale colours, which may have been well enough chosen in regard to their hues, but whose particular degrees of strength or tint have not been attended to. Thus the intensity of

one or more may so affect those which they were intended to balance and relieve as to give them a faded and unfinished appearance. This may proceed from applying the fundamental laws without any regard to the minutiae; for although it is always necessary to subdue and neutralise such colours as are introduced in large quantities, yet when they are reduced by dilution alone the effect cannot be good. This error is also very common in the colouring of carpets and paper-hangings. In such productions the degree of intensity of the individual colours is seldom taken into account. A pale tint of blue is often introduced as an equivalent to the richest orange colour, and sometimes a small portion of lilac—one of the lightest tints of purple—as a balancing colour to a quantity of the most intense yellow. This is inverting the natural order of colours altogether, as will be more particularly shown in the sequel.

There is a fourth defect, and rather a common one, and that is a want of the media already alluded to, which unite and harmonise an assemblage of bright colours, which may, in other respects, be perfectly well arranged; for it is a rule in the higher branches of the art, that confusion of parts of equal strength should always be avoided. A room of this description resembles a Chinese landscape, where foreground and distance are jumbled together.

An opposite defect to this is monotony, or a total want of variety; for some are so afraid of committing

errors in point of harmony, that neutral tints only are introduced, and sometimes one tint of this kind alone prevails. Variety is a quality found to exist in the most trifling as well as in the grandest combinations of nature's colouring; and it is, as already observed, in uniting and making an arrangement of various colours harmonious and agreeable to the eye, that the skill of the house-painter and manufacturer chiefly consist. It is this which produces what is termed repose in a picture, a quality equally desirable in the colouring of an apartment.

The tone or key is the first point to be fixed, and its degree of warmth or coldness will be regulated by the use, situation, and light of the apartment. The next point is the style of colouring, whether gay, sombre, or otherwise. This is more particularly regulated by the use of the apartment, and the sentiments which it ought to inspire; for, as Sir Joshua Reynolds says, in regard to colouring, "What may heighten the elegant may degrade the sublime." Unison, or a proper combination of parts, is the next consideration.

The tone or key is generally fixed by the choice of the furniture; for as the furniture of a room may be considered, in regard to colouring, in the same light as the principal figures in a picture, the general tone must depend upon the colours of which it is composed; for instance, if the prevailing colour be blue, grey, cool green, or lilac, the general tone must be cool; but if, on the other hand, it is red, orange, brown, yellow,

or a warm tint of green, the tone must be warm. But, as stated before, there can be no pleasing combination of colours without variety. This, by judicious management, may be given without in the least interfering with the tone, for it is merely the general colour of the furniture which ought to fix the tone; and there may be the most decided contrasts in its parts, which, by the introduction of proper medial hues throughout the room, can be reconciled and united. Apartments lighted from the south and west, particularly in a summer residence, should be cool in their colouring; but the apartments of a town house ought all to approach towards a warm tone; as also such apartments as are lighted from the north and east of a country residence.

When the tone of an apartment is therefore fixed by the choice of the furniture, it is the business of the house-painter to introduce such tints upon the ceiling, walls, and wood-work, as will unite the whole in perfect harmony. This, as I have already observed, is a difficult task: the colours of the furniture may be arranged by a general knowledge of the laws of harmony, but the painter's part cannot be properly added, without the closest attention to the principles of art.

The style of colouring is the next point to be fixed, and will depend entirely on the use of the apartment. In a drawing-room, vivacity, gaiety, and light cheerfulness should characterise the colouring. This is produced by the introduction of light tints of brilliant colours, with a considerable degree of contrast and gilding; but

the brightest colours and strongest contrasts should be upon the furniture, the effect of which will derive additional value and brilliancy from the walls being kept in due subordination, although, at the same time, partaking of the general liveliness.

The characteristic colouring of a dining-room should be warm, rich, and substantial; and where contrasts are introduced, they should not be vivid. This style of colouring will be found to correspond best with the massive description of the furniture: gilding, unless in very small quantities for the sake of relief, should be avoided.

Parlours ought to be painted in a medium style, between that of a drawing-room and dining-room.

The most appropriate style of colouring for libraries is solemn and grave, and no richer colouring should be employed than is necessary to give the effect of grandeur, which can scarcely be done where one monotonous tint prevails; but care should be taken not to disturb the quiet and solemn tone which ought to characterise the colouring of all apartments of this description.

In bed-rooms, a light, cleanly, and cheerful style of colouring is the most appropriate. A greater degree of contrast may here be admitted between the room and its furniture than in any other apartment, as the bed and window curtains form a sufficient mass to balance a tint of equal intensity upon the walls. There may also, for the same reason, be admitted gayer and brighter colours upon the carpet.

Stair-cases, lobbies, and vestibules, should all be rather of a cool tone, and the style of the colour should be simple and free of contrast. The effect to be produced is that of architectural grandeur, which owes its beauty more to the effect of light and shadow than to any arrangement of colours; yet they ought not to be so entirely free from colour as the exterior of a mansion, but should be in colouring what they are in use, a link between exterior simplicity and interior richness.

Stair-cases and lobbies being cool in tone, and simple in the style of their colouring, will much improve the effect of the apartments which enter from them.

ON COLOURS INDIVIDUALLY.

WHITE, as already stated, is produced by the reflection of all the colours simultaneously in their relative neutralising proportions. Its contrasting colour is black, with which it is correlative, being the opposite extreme of neutrality. It lies nearest in series to yellow, which may be reckoned its melodising colour. It, however, harmonises in conjunction and opposition with all other colours. Every colour in its series of tints becomes subdued in force proportionally as it approaches towards white. It is the representative of light as black is of darkness; its effect on the eye is therefore cheerful and enlivening.

In Syme's Nomenclature of Colours, there are no

fewer than eight different tints of white enumerated ; and although the terms reddish white, &c. are rather anomalous, yet there seems to be no other way of denominating the lightest tints of colours. For instance, when the lightest tint of any colour is placed beside the most intense, it will appear to the eye a pure white ; but when placed beside the purest white, the colour will appear with which it is tinged. Still it should be understood, that if it be a single shade beyond the first remove or gradation from pure white, its name must be altered to a light tint of the colour with which it is tinged.

The only white which is generally understood or used besides the purest tint, is French white, which is, properly speaking, the lightest shade of purple, and is of all colours the most delicate and aerial. It is seldom employed in house-painting ; yet, when the situation, furnishing, and character of an apartment are properly adapted, it has an extremely pleasing effect. I have seen it made the prevailing colour of a drawing-room in a country residence, where the furniture being composed of light blue silk, satin-wood, various light marbles, and gilding, it had the most lively and cheerful appearance imaginable. It may be requisite to observe, that the French white on the walls was kept rather low in tone, so as not to interfere with the effect of the furniture. French white can only be introduced when all the other colours are light and cool in tone, as any quantity of intense or rich colouring completely sub-

dues it; and where gilding forms part of the arrangement, a little additional warmth should be given to it. The same may be said of pure white: all colours brought into contact with it should be light and cool, amongst which grey and green are the most suitable. Very light yellow, of the tint of the primrose, forms also a pleasing arrangement with pure white.

In rooms where white and other cool tints predominate upon the walls and wood-work, the furniture should be of an equally light description. Bamboo and satin-wood are the best woods. The same considerations should regulate the choice of the carpet and curtains. White not many years ago was the only colour in use for the wood-work of rooms of every description; it has now almost entirely given way to shades of various colours, and imitations of the finer kinds of woods. It is still, however, adopted for bed-rooms, particularly in summer residences, where its light, cheerful, and cleanly effect is extremely pleasing, when not destroyed by the introduction of violent and deep colours.

A south light is the best for white, and all such colours and furniture as assimilate with it. When it is the predominating colour in a room lighted from the north, it ought to approach slightly towards a cream colour, so as to counteract as much as possible the cold reflection of such a light.

In patterns for coloured manufactures, pure white ought not to be used along with intense and rich colours,

unless melodised by light and delicate tints. Indeed it ought, in manufacture as in decoration, only to be used where the character of the arrangement is of a light and delicate nature. Its effect in arrangements of deep, rich, and intense colours, is generally harsh and spotty. When employed as a groundwork for a carpet, it ought to be to a certain extent reduced in intensity, by which great additional effect will be given to the tints with which the pattern is coloured. When the general tone of a pattern of this description is warm, that is, where red and yellow prevail, the white ought to be slightly tinged towards a cream colour. On the other hand, when the tone is cool, blue or green being the prevailing colour, it may be tinged towards purple, grey, or any other cool tint or shade. When white, however, is used, not as the medium to an arrangement, but as a contrasting colour to any particular tint, it ought to be toned with the opposite hue.

YELLOW, of the three primary colours, partakes most of the nature of white, being the lightest of all decided colours, and the brightest on the prismatic spectrum. Its contrasting colour is purple, a compound of the other two primaries; its proportional power to which is as three to thirteen, either in quality or intensity. It constitutes, in combination with red, the secondary orange; and, when compounded with blue, it produces the secondary green. These two colours are, therefore, its melodising hues. It is the most powerful of

the positive colours, and consequently the least agreeable to the eye, when unaccompanied, or when predominating in a pure state. Being the lightest of positive colours, it, next to white, forms the most powerful contrast to black. There are fourteen varieties of yellow enumerated in Syme's Nomenclature; but what is here meant by yellow is the colour of the yellow jasmyn, or deepest hue of lemon. Yellow, of course, forms a component part of all the tertiary or neutral hues, either in predominance or subordination.

The tertiary, in which it is the archeus or ruling colour, is that called citron, which, being a compound of orange and green, the two secondaries into which yellow enters, has a greater proportion of that colour than either of the other two tertiaries. Citron is of itself a soft and pleasing colour to the eye, and is the lightest of all the distinct hues arising out of the treble combination of the primaries. It is very useful as a contrasting colour amongst low tones of purple and crimson. In tracing yellow still farther down in the scale, the next understood colour in which it predominates is the semi-neutral hue brown, a most efficient colour in all the low parts of every warm-toned arrangement.

The annexed Example, No. 3, shows the yellow in contrast with purple, along with their deepest neutral hues, brown and marone, and having the tertiaries citron and russet as media. Example No. 4 exhibits it in its various combinations and gradations of hue



EXAMPLE III.



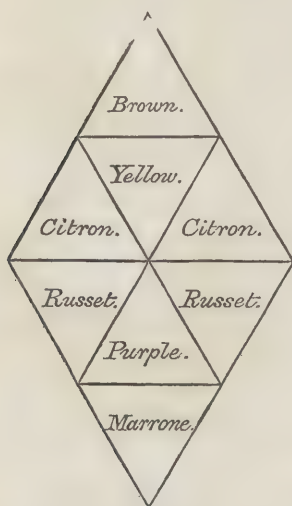
EXAMPLE IV.





down to black. There are, of course, countless intermediate hues and shades between any two of those upon the diagrams.

EXAMPLE III.



EXAMPLE IV.



In artificial lights pure yellow apparently loses much of its intensity, because it cannot be easily distinguished from white. This occurs from all such lights being less or more of a yellow tone, and consequently diffusing this colour over all objects within their influence; white thereby becoming yellow, and yellow remaining unaltered.

In decoration, pure yellow cannot be employed in large masses, but merely as a heightening colour; yet

light tints of yellow have a very pleasing effect in bedrooms, especially such as are lighted from the north and east, and form an agreeable arrangement with white, lilac, or chintz furniture. They have also the advantage of being easily lighted, and thereby appearing very cheerful at night.

There is no colour that requires more management than yellow in coloured manufactures. This colour is almost always employed in its purest and brightest hues; while the other colours which, according to their relative powers, ought to predominate in intensity, are very generally much inferior. Whether this proceeds from the ease with which it is produced in dyeing, or from a desire to produce a striking effect, I know not; but its abuse in this way must be apparent to all people of taste who have paid any attention to the matter. It is, however, in its various tints and combinations, of the greatest value in producing brilliancy and richness, as will be afterwards shown.

ORANGE is the next colour in power; it is a compound of yellow and red, in the proportions of three of yellow to five of red. Between these two colours it appears in the prismatic spectrum, rainbow, and other natural phenomena; they may, therefore, be termed its melodising colours. Its contrasting colour is blue. Orange is the extreme point of warmth in colouring, as blue is of coldness; they, therefore, form the most perfect contrast in this respect, as they do in their

numerical proportional power, being eight to eight. In its combination with green it produces the tertiary citron, and with purple the tertiary russet.

Although orange is perhaps the most powerful of all colours, yet it possesses a mellowness and richness which renders it one of the most effective in all general arrangements. It should, however, next to yellow, be employed with a very sparing hand; for it is, as well as that primary and red, offensive to the eye when viewed alone, and unresolved by a proper proportion of its contrasting and melodising hues. The various beautiful tints produced by the dilution of orange are the most useful in heightening all ornamental colouring, amongst which that termed gold-colour is pre-eminent. Orange, like the two other secondaries, has great variety of hue, according to the predominance of either of its component parts. As it advances towards yellow, by a predominance of that colour in its mixture, pure blue can no longer be employed as a perfect contrast or neutralising colour, but hues of purple, advancing towards the perfect state of that colour in the same ratio as the orange advances to the yellow.

On the other hand, when the orange colour recedes towards red, by a subordination of the yellow in its composition, green, in its various hues, becomes the perfect contrasting colour; and as the red predominates in the orange, so ought the green to approach towards its perfect or prismatic hue. It is not, however, always necessary or desirable that colours em-

ployed as harmonising accompaniments to one another should be of equal power, although it is most essential to the colourist to know the proper method of making them so.

Suppose orange to be the archeus or key-note adopted for an arrangement of colours, either in the decoration of an apartment, or in the design of a carpet, or other piece of manufacture, the blue ought to be subordinate, either in intensity or quantity; and this subordination in intensity ought to be in shade rather than tint, or by neutralising the blue by the admixture of a small portion of orange colour.

In the medial colours employed in an arrangement of this character, the deep rich tones of russet, citron, and brown ought to predominate, relieved occasionally by the deepest shades of indigo. Black and white are both out of tone in such an arrangement, especially the latter.

Pure orange, from its great power, is not often employed in decoration, yet many of its hues are the best adapted for window curtains, chair seats, and other furniture, where gorgeousness and splendour are desirable. The gold and giraffe hues so employed, along with the cool emerald tint of green on the walls, produce, when properly harmonised by their accompaniments, one of the most pleasing effects in ordinary decoration. In this case, however, the green is the ruling colour, and such an arrangement will therefore admit all such hues and tints as harmonise with that colour.

RED is the third in the chromatic series, and second of the primaries. It is the most positive of all colours, holding the middle station between yellow, which is most allied to light, and blue, which is most allied to shade; it is, as Field expresses it, pre-eminent among colours. The hues with which it melodises in series, are, of course, orange and purple, being its combinations with the other two primaries. Its contrasting colour is green, a compound of yellow and blue, in the proportion of three yellow to eight blue. Red is decidedly a warm colour, and, to a certain extent, communicates this quality to every hue into which it enters.

This effect of warmth is most apparent in its combinations with yellow; for in those with blue it becomes more cool and retiring. From the medial situation of red, and from its power in subduing the effect of such colours as enter, in minute proportion, into combination with it, its name is very indiscriminately applied. The first decided hue produced, in its approach towards yellow, is scarlet; and, in its approach towards purple, it produces the most splendid of all hues of this description, crimson. But before arriving at either of these understood colours, there are an immense variety of hues, to all of which the general term red is commonly applied. It is not easy to describe what is meant by pure red; probably the most intense geranium colour is the nearest approximation generally understood.

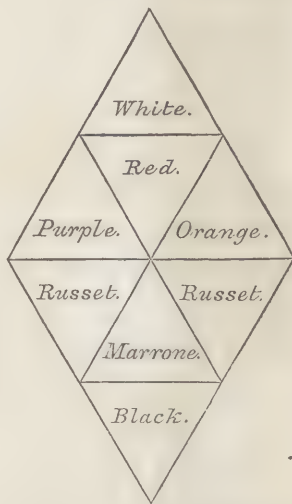
That which I have given upon the diagrams is the nearest I could produce by a pigment, yet it is far from being perfect.

Examples 5 and 6 show red in its harmony and melody, as explained in treating of yellow.

EXAMPLE V.



EXAMPLE VI.



The tertiary in which red predominates is russet, a medial hue between purple and orange, and consequently having a double occurrence of red in its composition; therefore, it is the most positive and warm of the neutral colours. It is of great power and value in all the deep parts of any warm-toned arrangement, as a contrasting colour to the deep hues of green, neces-



The above figures are for the year 1900, and are based on the results of the census of 1900. The figures for 1910 are given in the following table.

TABLE 1. - The results of the census of 1910, showing the number of persons in each of the following classes:



The above figures are for the year 1910, and are based on the results of the census of 1910. The figures for 1920 are given in the following table.

TABLE 2. - The results of the census of 1920, showing the number of persons in each of the following classes:

The above figures are for the year 1920, and are based on the results of the census of 1920. The figures for 1930 are given in the following table.

TABLE 3. - The results of the census of 1930, showing the number of persons in each of the following classes:

EXAMPLE V.



EXAMPLE VI.





sarily brought in as relieving colours. The semi-neutral marone is the next understood hue in its descent to black. This hue is the most useful of all semi-neutrals in such arrangements as are best adapted for patterns of carpets, and other similarly coloured manufactures. It is deep and clear, and although allied to red, is sufficiently cool to admit of its being used as the deepest shade in such arrangements as have a predominance of cool-toned colours.

From the positive nature of red, there is no colour that requires more toning and management, when exhibited in large masses, either in decoration or in variously-coloured manufacture. The effect of red individually being striking and powerful, it has, like yellow, been much too indiscriminately employed. We have only to look at nature for the proper use of this colour. We shall there see that red seldom appears in its full intensity, and when it does so, it is at that season when its effect is balanced and neutralised by the general verdure which clothes the earth. Red, however, in nature as in art, is indispensable in producing, by combination, that variety of hue so essential to the effect of every arrangement of colours. The landscape painter knows well that neither sky, water, nor foliage, can be successfully imitated without the introduction of this colour.

Pure red, and its various hues of scarlet, are too violent and obtrusive to be used in large masses, either in decoration or in any general arrangements of colours

upon a piece of manufacture, unless under very peculiar circumstances. It forms, however, like orange, an excellent leading colour or key-note. On all such occasions its contrasting colour, green, ought to be neutralised by being brought in tone towards olive: bright green, if employed at all, ought to be used in very small quantities. The tertiaries ought generally to be those in which red predominates, and blue subordinate to yellow, and these relieved by deep rich tones of green. A small proportion of gold colour adds brilliancy and effect to arrangements of this description.

There is an exception, however, to this rule in decoration; some rooms are so lighted that the direct rays are entirely thrown upon the floor, and the walls left comparatively in shade. In cases of this kind, I have known a bright scarlet upon the wall produce an excellent effect, the want of direct light preventing it from obtruding upon the eye. In such cases deep-toned colours ought to predominate on the carpet. Gilding is of much importance in melodising and heightening the effect of apartments decorated in this style.

Crimson is, of all the hues arising from the mellowing of the primary red, the most gorgeous and useful as a leading colour. The green which relieves it best is that which approaches the citron hue. This colour, from the splendid and rich effect which it always produces, and from its being, of all the hues of red, the

most cool and mellow, is much used in internal decoration. It is also, when of a proper shade and tone, an excellent ground for pictures, and associates well with gilding. This latter quality proceeds from the crimson partaking, in a small degree, of the property of purple as well as red—the one being the contrasting colour to yellow, and the other the melodising colour to orange; the colour of gold in its lights and shadows producing these two.

From these circumstances, crimson, of a proper depth and hue, has been generally adopted by the proprietors of those splendid mansions where the finest collections of pictures are to be seen. This has led to its adoption in general; but, from the great variety of hues which are produced under this name, many glaring errors have arisen. Most of the flocked papers so much in use, and erroneously called crimson, partake more of the hue of scarlet; while others are crimson on the pattern, and a tint of pink on the ground. This often arises from the pattern being of one material and the ground of another; and even when the ground and pattern are at first the same, the former, from its being merely a thin wash of water colour upon white paper, is soon reduced to a pale pink—while the pattern, from its facility in collecting dust, becomes a dark sombre red.

From crimson proceeds that beautiful series of tints called pinks or rose colours, which are so essential and effective as heightening reds in all cool-toned arrangements.

There are various other denominations of red. Syme has eighteen altogether; but they are all, with the exception of the purest colour, compounds of two or all of the primaries.

PURPLE lies next in series to red, of which colour and blue it is composed, in the proportion of five of the former to eight of the latter. In this state of intensity it forms the proper contrasting or neutralising colour to pure yellow. The two primaries of which it is compounded are its melodising colours. Although red be one of its component parts, it is rather a cool colour, and very retiring in effect: being also the darkest of the secondary colours, it bears the nearest relation to black or shade, as its contrasting colour, yellow, does to white or light. From these qualities, purple is a pleasing and agreeable colour to the eye; in this respect it is second only to green. In its combination with green it produces that soft and useful tertiary colour, olive, and with orange, the most powerful of this class, russet.

Purple has, like the other compound colours, various hues; but these are bounded in its approach to red by crimson, and towards blue by indigo. Its tints have also names peculiar to themselves, such as lilac, peach-blossom, and several others.

Purple is not much used as a leading colour in decoration, which, I believe, arises from its bad effect in artificial light. It has been already noticed that all artificial lights, used for economic purposes, are less or

more of a warm yellow colour, as any one may observe in viewing the flame of a candle or gas-lamp in daylight. This colour being the natural contrast to purple, and being thus diffused over it, neutralises and injures its effect. Indeed all cool colours are less or more injured by the effect of such lights, while warm colours, from their being allied to red, are improved in brilliancy. The diagrams, by being viewed in clear daylight, and immediately after in candle-light, will illustrate this fact in a sufficiently satisfactory manner. This effect of artificial light is worthy of particular attention, for it is not only the positive colours upon which it is produced, but upon compound hues of every description, according to the predominance of one or other of the primaries in their composition.

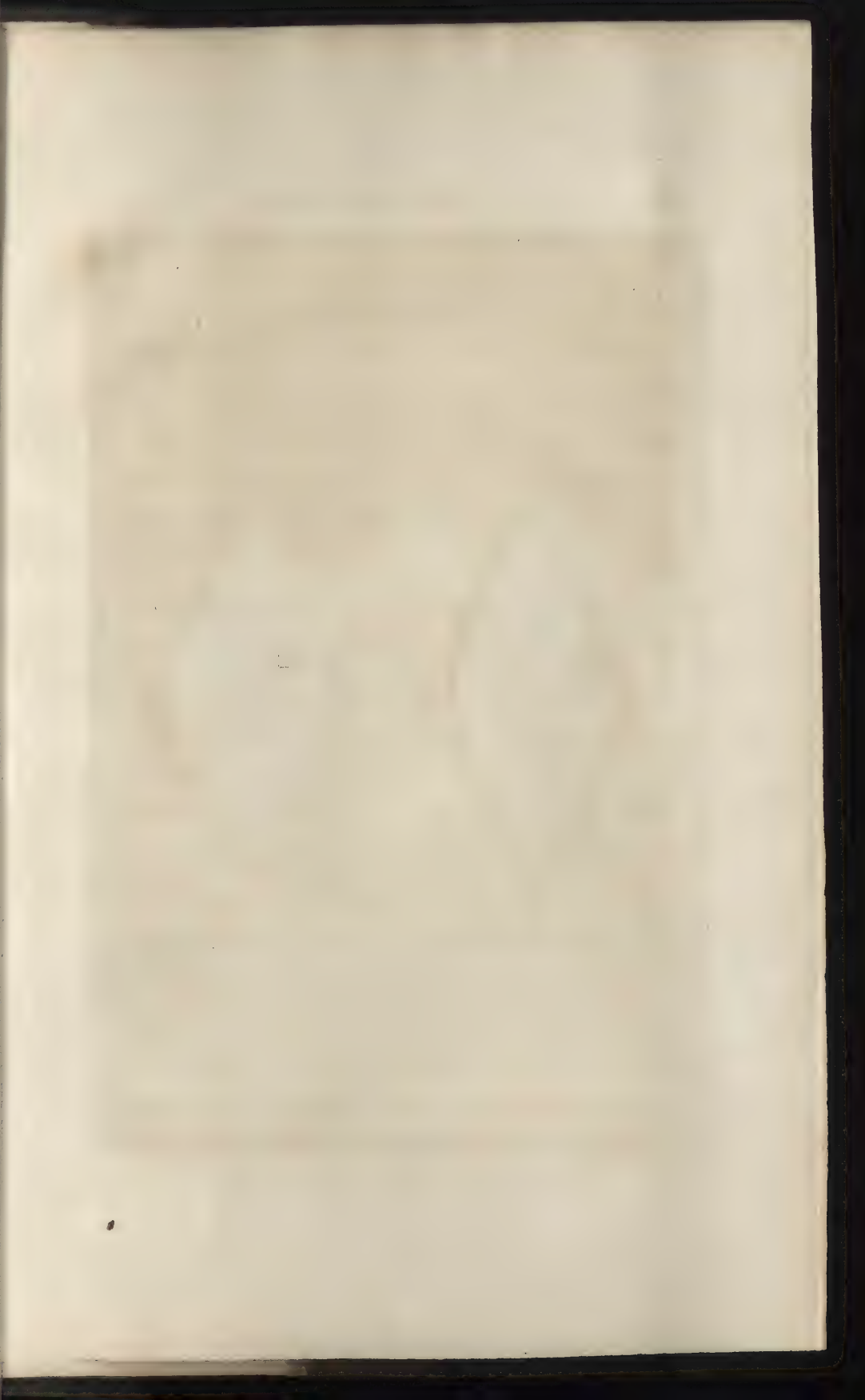
Purple may be used in large quantities in any general arrangement, especially when of a cool tone. In the richest patterns of carpets, shawls, and such like pieces of manufacture, its deepest hues are invaluable. Its power of contrast to all the warm tones of yellow gives them additional warmth and brilliancy; while its natural clearness prevents it from ever appearing murky or heavy.

BLUE is the third of the primary colours, and fifth of the chromatic series. It is, of the primaries, the nearest in relation to shade, as yellow is to light. It is the only absolutely cool colour, and communicates this quality to all hues into the combination of which

it enters. The contrasting colour to blue is the secondary orange, and its melodising colours in series green and purple; with the former of which, however, it is more discordant than either of the other two primaries are with either of their melodising colours. This gives rise to the necessity of a seventh colour of a neutral description, which ought generally to be interposed between these two colours when in their perfect state of intensity. This neutral hue is the medium between warmth and coolness, and between light and shade, or black and white.

The tertiary colour olive, from being the medial hue between purple and green, and arising from their combination, has a predominance of blue in its composition, and is therefore the tertiary that first occurs in the progress of blue to black, or to negation in shade.

Olive, as an individual colour, is soft and unassuming, and is of great use in all arrangements, whether cool or warm. Its effect as a melodising hue with blue, green, and purple, will be seen by the annexed diagram. But it is in its contrasting powers in the lower notes (to continue the analogy) of warm-toned or brilliant compositions, that it is most valuable. It relieves and harmonises, according to its various hues, the tertiaries russet, citron, marone, and brown. Owing, however, to the discord already noticed, it ought never to be brought into immediate contact with blue; it is absolutely necessary to introduce a semi-toned colour between them. This colour may be a grey of a warm



EXAMPLE VII.



EXAMPLE VIII.

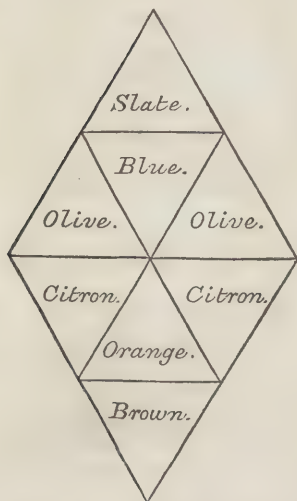




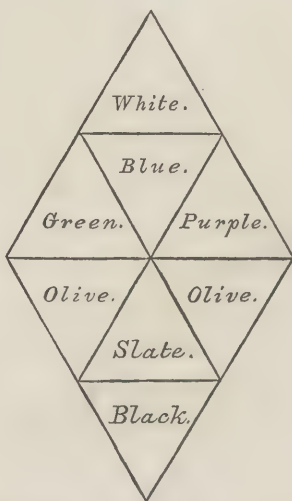
purply hue, and will melodise best in being blended with the blue, and produce harmony in coming distinctly against the olive in its full warmth. Slate-colour is the next hue in the progress of blue down to black, which, from its peculiar nature, cannot be used in any but cool-toned arrangements.

Examples 7 and 8 show these relations of the blue in harmony and melody, as already explained.

EXAMPLE VII.



EXAMPLE VIII.



Blue is individually a pleasing, and, at the same time, a brilliant colour. It may, therefore, be used in any general arrangement of colours, as it is in the colouring of nature, in a much larger proportion than

either of the other two primaries. As a leading colour in decoration, it is extremely beautiful when in its proper place. For instance, in the drawing-room of a summer residence, especially when lighted from the south, its effect as an *archeus* or key is cool and refreshing, as also in bed-rooms of the same description. In all variously-coloured manufactures of silk, pure blue, when properly introduced, is both sparkling and pleasing; but in worsted manufactures its shades and tints are the most useful; as, probably from some difficulty in procuring a proper dye, it is seldom, if ever, produced in perfect purity in such fabrics. Pale tints of blue, or any other cool colour, ought never to be introduced into warm arrangements. In such cases it ought always to be used in its deepest hues and shades. This ought to be particularly attended to by designers of patterns for manufactures, for the indiscriminate introduction of light cool tints is a prevailing error amongst them. It has already been explained, that warm colours are naturally allied to light, and cool colours to shade. Lights tints are therefore, when employed in such designs, enhanced and strengthened by being of a warm tone, and are consequently neutralised and sunk as they approach to that which is cool. In the works of the most eminent artists, this coolness and subordination of the shades, and glowing warmth in the lights, must be apparent to all who have paid any attention to the subject.

GREEN, although the last in the general series which I have adopted, is the medial or second of the secondary colours, being a compound of yellow and blue, in the proportion of three of the former to eight of the latter; the one primary being most allied to light, and the other to shade. Its melodising colours are of course these two primaries, and its contrasting colour the remaining primary, red. As red is the most decided or pre-eminent of the primaries, so green is the most neutral and soft of the secondaries, and the most pleasing and agreeable of all decided hues to the eye. It is also unlike the other two secondaries in this respect—that, in its approximation to either of its component parts, it produces no other distinct denomination of colour; all its hues retaining the same name. Out of the union of green with orange arises the lightest of the tertiary colours, citron; and out of that with purple, the deepest olive, to which it appears particularly allied.

Green is the natural clothing of the vegetable world, and, in a certain degree of purity, predominates in the same ratio of quantity that red is held subordinate. It is, in that infinite wisdom so conspicuous in all the laws which govern the universe, in its greatest intensity and depth when the sun's rays are most powerfully directed to the earth, thereby counteracting the intensity of their reflection, and refreshing the eye by its soft and soothing influence. Green, however, like every

other hue in nature's colouring, seldom appears in vegetation in its primitive purity. Hence the beautiful accordance between the green of the landscape and the blue of the sky, so evidently assisted in both harmony and melody by the intervention of the warm and neutral grey, which prevails intermedially in the distance of the one and the horizon of the other. In its various hues, green, as may naturally be supposed, is a favourite colour in decoration, and would be much more so, were it not that in artificial light its effect is much deteriorated, becoming in most cases dull and heavy.

The cause of this I have already explained in treating of yellow and purple. This, however, may in a great measure be avoided by judicious management in keeping it in its proper place, and in selecting proper colours as an accompaniment to it. A rich hue of green upon the walls of a drawing-room, accompanied by cream-colour, French-white, and gilding on the cornice, ceiling, and wood-work, with damask hangings of giraffe and gold colour, and a suitable carpet, never fail to produce a pleasing and splendid effect in any light. When this arrangement is inverted, that is, when the hangings and chair-seats are green, and the walls of a warm tone, the effect is equally beautiful in daylight; but in artificial light it is injured by the green being neutralised, and the warm tone on the wall rendered more effective; thus making that which is principal in the arrangement, and of the smallest quantity, recede, while that which ought to retire and be subordinate is

brought forward. This applies to all other colours employed in decoration, according to their relative powers of reflecting or absorbing such kinds of light.

Of all decided colours, green may be used with most freedom in manufacture. In carpets especially it ought almost always to preponderate. They receive the rays of light more directly during the day than any other part of the furniture or decoration; and this colour is not only in that light most pleasing, but also relieves and harmonises others more generally in its various hues than any other colour. Its bright and vivid hues and tints are easily neutralised, and seldom produce crudity or harshness of effect in any arrangement. Rich and deep tones of green, especially when neutralised towards a tertiary hue, harmonise with, and give value to all denominations of warm colours. Its cooler hues and shades ought, however, to be used with more caution; for they are apt to appear blackish and heavy. The blue no doubt predominates in them to the same extent that it does in the hues of purple called indigo, yet they have not the same clearness.

As already observed, there cannot be produced any other absolutely distinct description of colour but one, and that is by a combination of the three primaries, or, what is the same thing, any two of the secondaries. Of the infinite multitude of hues which arise out of this triple combination, I have in another part adopted, as the seventh colour, the most neutral of them all, grey. Those tertiary hues that are distinguished

by a predominance of one of the primaries in their composition, I have noticed in treating of such primary. In decorative arrangements, oak may be reckoned of a citron, and mahogany of a russet hue, and they will of course bear the relation of these tertiaries to the other colours with which they are associated.

BLACK, as already noticed, is produced by the absorption of the three primaries, and its natural contrast is white. It can only be used in large quantities in arrangements of a cool and sombre character, and ought always to be pure and transparent. For want of this quality in the black employed in the generality of worsted fabrics, it has always a sooty and heavy effect. It ought therefore to be employed in such manufactures with great caution. Perhaps the most general error in the colouring of the carpets manufactured in this country, is the too frequent use of black and white. The deepest shades should never go below indigo, marone, or brown; and the highest tints, as already observed, would be much improved by being mellowed down by some warm colour. More latitude may be taken with black in the colouring of silk manufactures, as it can be produced on that material in the greatest clearness and depth. Its use in modern decoration is rather limited, being generally confined to chair-seats, door-mountings, and dining-room chimney-pieces.

In the decorative painting, however, of Pompeii and

x
Herculaneum, it was used in much profusion; and in combination with the intense and brilliant colours which accompanied it, produced the most splendid effect. This evidently resulted from the perfect knowledge possessed by the colourists of that period of the relative powers of their materials, which seem to have been in their hands what the keys of a powerful organ would at the present period be in those of an eminent composer of music. Yet this use of the brightest and deepest colours by the ancient Romans, was perhaps more a particular characteristic of style, than a beauty in their decorative colouring.

Black and its contrasting hue, white, are the two most dangerous colours in the whole chromatic series; the one being at the bottom and the other at the top of the scale, they each require particular management. When an arrangement of rich and intense colours is here and there interrupted by patches or shadings of black, as too often happens in patterns of carpets and other subjects of a similar nature, the effect is harsh and unpleasant. It ought, therefore, in all such designs, to be accompanied and mellowed by such deep hues as lie next it in the natural series. White should in like manner, as before noticed, be introduced by a gradation of the lightest tints, otherwise the effect will be spotty and broken.

It will be observed, that the rules I have endeavoured to lay down are quite general, and, as far as I could

x. The great Library at Roshington Hall is painted imitation of some interior at Herculaneum. The wall ceilings are formed into large panels - the ground of which is black - the mouldings, &c. are gilded &c. each panel is a group or figure painted by the late A. or an Italian Artist who died there. The effect is splendid.

52 THE LAWS OF HARMONIOUS COLOURING.

make them, elementary; I therefore leave, in a great measure, their particular application to those who follow the various professions in which a knowledge of colours and their relative qualities may be useful.

ON THE APPLICATION OF THE ARTS
OF
DESIGN AND COLOURING
TO
MANUFACTURES.

SINCE the preceding part of this treatise went to press, I have had an opportunity of perusing a portion of the evidence taken before a select committee of the House of Commons, on the state of art as applied to the manufactures of this country, from which it is proved, that this branch of industry has suffered greatly from an inferiority in the design and colouring of our patterns of all kinds of fancy goods, when brought into competition with those of other countries.

Mr Smith, one of the greatest silk-merchants in London, stated in his evidence before this committee, that in fancy silks, the superiority of the patterns in French goods occasioned the sales to be in the proportion of one-half or more of French; that in fancy ribbands, three-fourths of those sold were of French

manufacture, and obtained public favour solely on account of superiority of design.

James Skene, Esq. of Rubislaw, the secretary to the Board of Trustees for the Encouragement of Manufactures in Scotland, says—"It appears to me that one thing in which the British manufacturer is most deficient, is a knowledge of colours. At present, as far as my acquaintance with manufactures goes, I believe they copy entirely their patterns from France: in doing so, if they introduce any alteration into them, they often spoil them; and we know quite well, that any deviation from the regular established and fixed rules of harmony of colours, produces the same effect to the eye, as any deviation in music from the harmony of notes. It produces an equally bad effect; and in placing our manufactures or fancy goods along with French fancy goods, it has often struck me as a remarkable circumstance, to see how very little those rules, which are exceedingly simple, are attended to in the English copies."

Mr Crabb, a manufacturer of paper-hangings in London, states, that the designs of the French room papers are superior, in accuracy of drawing, to those of the English; and that the colours are arranged upon some fixed principle by the French artisan, while in this country, not being sufficiently instructed, the workman labours more at random, until he obtains the effect he wishes, and this may be as often wrong as right.

Charles Toplis, Esq., a vice-president of the London Mechanics' Institute, and one of the directors of the Museum of National Manufactures, says, "Many important branches of manufacture call for careful cultivation of the eye, for the purpose of arranging, assorting, and contrasting colours, which, as an affair of taste, calls for some portion of a painter's education;" and he adds, "whatever partakes of the nature of ornament will only be appreciated in a refined age, as it is characterised by grace and elegance of design, and by delicacy and precision of execution."

In addition to this evidence, I may add the opinion of Dr Ure upon the subject. In his excellent work, the *Philosophy of Manufactures*, he says, "The opinion generally entertained of the superiority of such French silks as are figured, and which depend for their beauty on tasteful arrangements, is no more a prejudice of mankind than the feeling in favour of the works of Raphael and Titian." * * "Taste is displayed both in the forms and grouping of the figures, and in the disposition of the colours."

Of the fact of a total neglect of the rules of harmonious colouring prevailing amongst our manufacturers, I have long felt convinced, and in the two former editions of this little treatise, as well as in the present, made particular allusion to it. Yet I was not aware until now of the important nature of the subject, or that it affected so materially the best interests of the

country. I trust I shall, therefore, be excused for adding a few observations on that subject.

The complaint seems to be, that there are not sufficient opportunities, in this country, for young men studying the art of design; and that, consequently, there is not a sufficient infusion of talent, or of the fine arts, into our manufactures.

It is, no doubt, true, that the cultivation of the fine arts will, in course of time, improve the perception and taste of a nation, from the highest to the lowest grades of society; this is, however, the work of ages, but the present state of our manufactures demands an *immediate* improvement in this particular.

It is remarkable, that while we are so far behind our continental neighbours in the application of the rules of art to our manufactures, the British school of painting should have risen so far above that of every other country in the world. And this is not all; for it must be evident to every one who may be in the habit of attending our annual exhibitions of modern pictures, that mediocrity of talent in the fine arts is multiplied beyond all probable means of employment.

I have had a good deal of experience in matters of this kind, from having had, for upwards of twelve years, seldom less, at any time, than ten or twelve apprentices to instruct in ornamental painting. I trust it will not, therefore, be reckoned presumptuous in me giving an opinion in the matter:

In the first place, I believe this want of ornamental designers, as Mr Skene has distinctly stated in one part of his evidence, to arise as much from the nature of the instruction given, as from the want of opportunities afforded for study. It is seldom that the young men who are admitted to our drawing academies consider their studies as merely intended to improve them in the useful arts to which they may be bred. They almost uniformly imbibe the idea of rising into a higher sphere; and seem to have no other ulterior object in their studies than to leave their humble calling, at the expiry of their indenture, and become artists. I speak from particular facts which have come under my own observation. Many an industrious young man, of mediocre talent, but possessing sufficient to have raised him to the head of ornamental painting, have I known sacrifice himself to a life of penury and neglect from this vain idea.

I shall here give an original anecdote of the illustrious author of *Waverley*, which relates directly to this subject. A young aspirant of this kind, during his apprenticeship, had produced some pictures which attracted the notice of this great man, who, with that goodness of heart for which he was so distinguished, took the youth under his particular patronage, and got him admitted to the academy of the honourable the Board of Trustees. This young man, at the expiry of his indentures, like most others in similar circumstances, turned his back upon the humble profession

of house-painting, to which he was bred, and laboured strenuously to gain a livelihood by painting pictures. Whether the penetrating eye of this wonderful man had seen, by the appearance of his protégé, the difficulties he was encountering, or by his works, that he had got a long probation to undergo before attaining eminence as an artist, is not known, probably both; but on one occasion, shortly after the expiry of his apprenticeship, when he waited upon his patron with a picture which he had been commissioned to paint, Sir Walter addressed him nearly as follows:—"I have thought for some time, that were young men who have a genius for painting, and who are not possessed of sufficient patrimony to enable them to follow such a course of study as alone can raise them to eminence in the fine arts, to endeavour to improve those professions in which a taste for painting is required, it would be a more lucrative field for their exertion. I know no profession that stands more in need of this than that to which you have been bred, and if you will follow my advice, you will apply yourself to its improvement, instead of struggling with the difficulties that you must meet in following the higher walks of art." In conclusion, he encouraged his protégé by promising him his own house at Abbotsford to begin upon, the building of which had just commenced. I need scarcely add, that this advice was followed, and the illustrious individual who gave it lived to see and acknowledge the satisfaction he felt from the beneficial effects that re-

sulted from it. I trust its insertion here may be equally serviceable to others, for it would have been well for many who are now struggling with those difficulties pointed at in Sir Walter's advice, had they, upon being seized with the mania of becoming artists, had such a counsellor.

Various reasons may be assigned for the prevalence of this mania amongst young men who have had opportunities of studying the art of drawing; the flattery of their friends; injudicious patronage; the desire to become, by the quickest and easiest means, a gentleman, and various others, over which no national institution can have any control. The most prominent cause, however, seems to be, that nothing is reckoned a work of art unless it be a picture. No matter how superior an ornamental design may be, or how much study and knowledge may have been required to produce it, still the production of such, although it may increase the wealth of the individual, cannot raise him one step in the scale of society—he is only a mechanic in the eyes of the public.

On the other hand, no sooner does the youth lay aside his useful implements, and dash off upon canvas something like a landscape—often with no eye to nature, but in servile imitation of some popular painter—than he seems to be by common consent raised to the dignity of artist. In short, those branches of the fine arts that are applicable to manufacture and other departments of useful industry, do not in

this country hold that relative situation to the more intellectual and higher branches to which they are fairly entitled. This is not the case in Italy, as I am informed by an artist who has studied for several years in that country.* He says, that in the Academy of the Fine Arts at Venice there are distinct professors in the following departments of art:—

Architecture—painting—sculpture—engraving—perspective—and ornament; and that in this latter branch the pupils are so numerous that the professor requires an assistant. Their examples are not only the best ornamental models of antiquity, but fruit, flowers, and foliage. Every fifteen days they are required each to make an original design within a given number of hours—precautions being taken to prevent deception; and according to its merits, advancement and preference are bestowed.

Dr Ure states, that “the town of Lyons is so conscious of the value of such studies, that it contributes 20,000 francs per annum to the government establishment of the School of Arts, which takes charge of every youth who shows an aptitude for drawing or imitative design of any kind, applicable to manufactures. Hence all the eminent painters, sculptors, even botanists and florists, of Lyons, become eventually associated with the staple trade, and devote to it their happiest conceptions.”

Even the Chinese seem to surpass us in directing

* Robert M^cInnes, Esq.

the studies of their youth distinctly to their ulterior object.

A writer on painting, in Arnold's Library of the Fine Arts, mentions having seen a Chinese drawing-book, with progressive examples, where the separate character of land and water, rock and foliage, were given in perfect detail; and to these were added implements of various kinds, with figures separate and in groups, all highly picturesque; and adds, that the object of all these preparatory studies of the pupil was to enable him to paint a fan, which was the last example given.

I feel quite assured that, were a similar course followed in our academies, a sufficient portion of that genius which at present seems to be all flowing into one channel, would, like a mill-lead taken from a river, be directed from that which is merely ornamental to that which is essentially useful and beneficial to the country. Art would not suffer from this; on the contrary, where real genius was discovered, the facilities of encouraging it would be much greater, and we should have less of that misapplied, and often selfish, sort of patronage which fosters mediocre talent until it is factitiously raised to where it cannot stand, and is then, by the desertion of such injudicious patrons, allowed to fall far below its own natural level.

I have attributed selfishness to some of these pretended patrons of art, for I know that they are often actuated by that feeling. They cannot bring their

minds to encourage those who have really proved themselves to possess the qualities that constitute the real artist; the works of such are too expensive, because their true value is known. Their protégés are the undeveloped, and they procure the early attempts of such for a mere pittance. They calculate that these embryo artists are all to be Wilkies and Allans in their day, and that their early productions will, like those of such great men, consequently become highly valuable. No doubt some have been successful, and on one occasion, well known to artists of the present day, circumstances proved the motive of the patron to be of this description. In many cases, too, injudicious patronage is the means of fostering mediocrity, which, assisted by other circumstances, is sustained in a situation injurious to the interests of true art. This is well known, and much lamented, amongst artists themselves—I mean such as really deserve the name. Hence the necessity of national institutions, where merit alone will receive patronage, and be honoured by the approbation of those who are best able to be its judges.

But to return to my subject.—Notwithstanding the superabundance of mediocre artists, it must be admitted that there is a want of proper instruction in the art of drawing, where it would be of most service, namely, in the populous manufacturing districts; and as this book, being now adapted to the improvement of manufactures, may probably find its way into those quarters, I shall add a few hints for the assistance of such as wish to

commence this pleasing and useful study, and who may not have had any previous instruction. The best kind of study to begin with, for those who intend to direct their attention merely to ornamental designs for manufactures, is that of flowers and foliage. When they are perfect in that branch, they may then soar higher if they please. It is the fault of most students in drawing to begin at the wrong end of their studies, by attempting difficult subjects before they are capable of drawing a single correct line; and this want of knowledge of the first elements generally sticks to them as long as they live, for in very few cases do those who neglect the attainment of this knowledge at the outset ever descend to the drudgery of doing so afterwards.

A FEW ELEMENTARY INSTRUCTIONS IN ORNAMENTAL DRAWING, WITH HINTS TO THE MORE ADVANCED.

A KNOWLEDGE of drawing is, next to reading and writing, an essential branch of education for the manufacturer and mechanic, and to every one a source of enjoyment. The course of study I am about to point out is within the reach of all—even those in the most humble situations of life. They will find it of easy acquirement, and a source of continual enjoyment, in the improved medium through which it will lead them to view the most ordinary productions of nature. She shall be their instructor; for all that I can pretend to do is to point out to them a practical mode of receiving

her lessons. To the uninitiated I therefore address myself; and let them not be dissuaded from beginning, by having no predilection for the study—the more they persevere, the more they will love it.

In the first place, your attempts ought to be of the most simple nature, and on as large a scale as you can conveniently adopt. Therefore begin by procuring a black painted board or slate, of from two to three feet square, and with white chalk practise the drawing of squares, circles, and ovals, without any guide to your hand. You may make yourself copies of these figures by the ordinary rules. When you are pretty perfect at these, upon the proper combination of which depend all linear harmony, you may practise in the same way triangles, hexagons, octagons, and such other figures as arise from the various combinations of the straight line. Next, by your circular and oval lines, you may form crescents, circular and flattened volutes, regular undulations, and other figures, which arise out of their various combinations, first making an accurate copy to yourself of each figure by measurement, and continuing to practise until you can form it by the eye with perfect ease. Avoid forming your figures by little bits at a time; do each line as much as possible by one sweep of the hand.

When you find yourself pretty perfect in this kind of practice, I would recommend you at once to draw from nature. You may take for your first subject a cabbage leaf, the larger the better; and persevere in

copying it, full size, until you can represent it accurately in outline, with its principal fibres. You may then vary your practice by other simple subjects of a similar kind, until you find you can do them all with ease.

Before endeavouring to draw more than one leaf at a time, you must know a little of perspective. The most simple mode by which you will attain such knowledge of this art as will be most useful for your present purpose, is to hang a circular object, such as a hoop, between you and the window—set it a moving gently round—recede a little from it—and you will find that, as one side of it retires and the other comes forward, the circle which it describes becomes narrower and narrower, until it disappears altogether, and leaves nothing but a dark line, as if a stick instead of a hoop were hanging before you. I recommend you to do this between you and the window, because the hoop will appear like a dark line, and you will thereby be better able to mark the change that takes place in the shape of the circle. Fix it in various positions, and draw from it, and observe that it is a different figure from an oval. A knowledge of this simple fact is all that you require of perspective in the meantime.* You may now hang up your cab-

* Those who wish to prosecute the study of perspective will find plenty of elementary works upon this art. An excellent method of teaching it is adopted by Messrs Simson of Edinburgh, in their academy. They place before their pupils figures of pyramids, cubes, spheres, and cylinders, of a convenient size, to stand on a table, and cause them to make accurate perspective copies of each figure by the eye alone. These models are also very useful in the study of light and shade. They are made of stucco, and in Edinburgh may be had at Regali's, St David Street.

bage leaf, or that of any other large and well-developed vegetable, and you will observe the same change in its figure as it turns round. Make an outline of its shape while its front is half turned from you, then bring it from between you and the light, and place it where the light will fall upon it, with its face half turned from you as when it hung before the window. Take your outline, and within it draw the principal fibres as you see them. To do this properly will require a great deal of practice, but it will pave the way to your being able to draw the most complete groups of flowers and foliage that can be placed before you. You may now hang before you a small branch of any tree or plant with two or more leaves upon it—the larger the leaves are the better; and endeavour to make outlines of them, varying their shape according to their perspective as already described; be particular on this point, for a great deal depends upon it. I knew an intelligent tradesman so unaware of the simple fact of a circular object altering its shape by being seen obliquely, that he returned his portrait to have all the buttons made quite round; for although they appeared so at a little distance, he found they were not, by actual measurement, like those upon his coat.

To gain anything like a tolerable accuracy in this first stage of your lessons may occupy from six weeks to two months; that is, supposing you only practise at leisure hours.

You may now lay aside your chalk and slate, and

provide yourself with a few sheets of common cartridge paper, and some pieces of common charcoal—that made from lime-tree is the best. Stretch a whole sheet of your cartridge paper upon your board by a wafer or a little paste at each corner. Place before you a cabbage, cauliflower, stalk of dock blades, or any such large vegetable, and they will be more picturesque if the outer leaves are hanging loose. Copy these carefully in outline, using your charcoal gently, that any inaccuracy may be easily dusted off. A large thistle with its foliage is likewise an excellent example, but more difficult. Indeed you cannot go wrong in your choice; hemlock, fern, nettle, are all worthy of your study. From these the richest and most effective of gothic ornaments were taken by our forefathers. The more you study such subjects, the more beauty and grace you will find in their forms. I need not here remind you of what suggested the richest of pure architectural ornaments, the Corinthian Capital—a basket with a weed growing round it.

Your next practice should be light and shade. Bruise a bit of your charcoal to powder, take a piece of any kind of cloth upon the point of your finger, dip it into the powder, and rub it upon such parts of your outlined subject as you observe in the original do not receive the direct light of the window, and where it appears lightest touch your copy with your chalk, leaving the clean cartridge paper intermedially

as a middle tint. Carry on with this sort of practice for some months.

For the coarse paper upon which you have hitherto practised, you may now substitute what is called drawing cartridge, which, instead of being merely fixed at the corners, must be pasted all round the edge; for charcoal, a black lead pencil, a swan quill hair pencil, and Indian ink—which latter article is now very cheap.

You may, however, still sketch in your subject lightly with charcoal, as it is more easily erased; and when you have got it quite correct, go over it with your black lead pencil. Rub down plenty of the Indian ink, for much of the freedom of your work will depend upon the wholesale way in which your shades are washed in. When you have diluted this to the requisite degree of depth for your lightest shades, paint them in with your camel hair pencil. Let this first shading dry; then give another coating where the shades appear deeper, and darken the mixture for the deepest touches. Continue this practice for six months before attempting smaller subjects than those I have described. You will now find little difficulty in copying the best examples of either ancient or modern ornament that can be laid before you; but flowers are your best practice, as you will now have obtained sufficient freedom, from practising upon the large subjects that I have recommended, to prevent you from

getting too finical and minute. I cannot lead you farther; you must go to a drawing-master for the proper use of colours. Should your patterns be adapted to damasks, however, you will have no use for this, unless for your amusement.

I am aware that this course of study would be useless to many, were the present style of patterns in their particular branches of manufacture to continue in fashion; for many of these designs are a jumble of forms of the most nondescript nature. Improvement, however, is loudly called for, and I trust these simple instructions may prove a first step towards it.

To those who have gained a facility in copying the beautiful forms which prevail in the vegetable kingdom, and who have had such instructions in the use of water colours as may enable them to copy individual flowers with ease, I would recommend the acquirement of a thorough knowledge of the laws of harmonious colouring. They will then be able to group and arrange flowers in the most agreeable and effective manner in regard to colour, as their previous experience must have taught them to accomplish in combination of form.

Dr Ure says, that "The modes in which taste is cultivated at Lyons deserve particular study and imitation in this country. Among the weavers of the place, the children, and every body connected with devising patterns, much attention is devoted to every thing in any way connected with the beautiful, either

in figure or colour. Weavers may be seen in their holiday leisure gathering flowers, and grouping them in the most engaging combinations. They are continually suggesting new designs to their employers, and are thus the fruitful source of elegant patterns." Hence the French flower patterns are remarkably free from incongruities, being copied from nature with scientific precision.

All these facilities for the improvement of our fancy manufactures are within the reach of the most humble. The pursuit of such a course of study as I have endeavoured to point out, would not only augment their sources of innocent pleasure, but lead them to other instructive pursuits. The youth, in searching for the most graceful and picturesque plants in Nature's most profuse and wildest productions, would be naturally led to commence the study of botany; for he would then have some interest in the enquiry. And it may be easily imagined with what avidity the more advanced would add to his knowledge of that pleasing science, or the gratification he would derive from the study and practice of horticulture.

I need scarcely point out the advantages to be derived from the cultivation of flowers by those engaged in designing ornamental patterns. The productions of a well managed flower garden to such would be, in my opinion, of more real utility, as objects of study, than the contents of the Louvre. In those productions of nature they will find the most exquisite beauty and

elegance of form, and, even in single flowers, the most perfect combinations of colouring.

In saying that the study of such subjects is of more utility to the ornamental designer than that of those great works of art which have been the admiration of ages, I do not mean to undervalue the benefit that any one, and especially the artist, may derive from studying works of this description. I am aware that "the eye has its principle of correspondence with what is just, beautiful, and elegant, and that it acquires, like the ear, an habitual delicacy, and answers, with the same provisions, to the finest impressions. Being, therefore, versed in the works of the best masters, it soon learns to distinguish true impressions from false, and grace from affectation."* I have therefore not the least doubt, that those who have risen to some degree of eminence as ornamental designers, would reap great benefit in attaining a knowledge of the various styles and subtleties of colouring, by carefully studying and copying, in masses of colour alone, the best works of art to which they can get access, and applying these arrangements to the particular figures of their patterns.

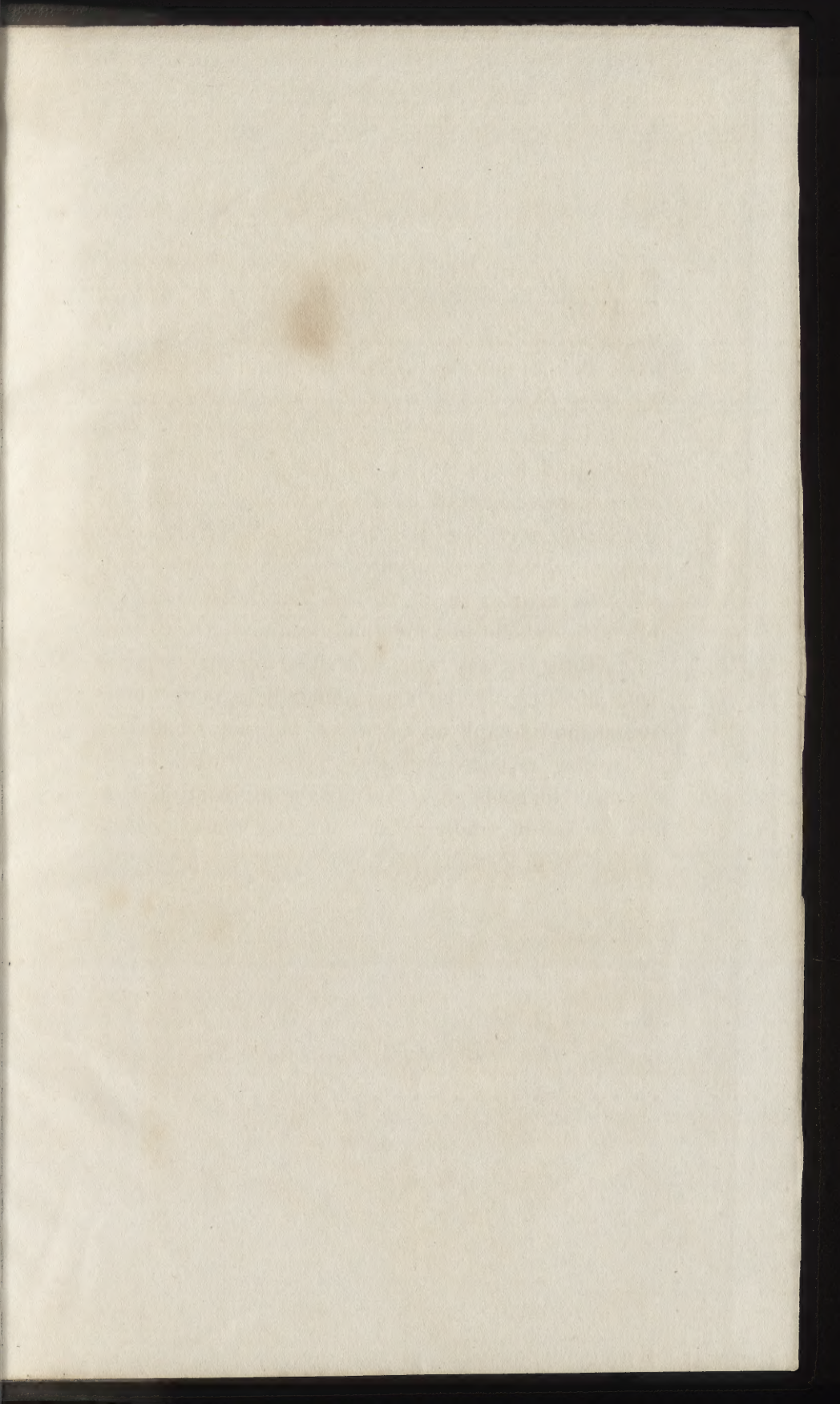
An eminent artist, now residing at Rome, in writing to me of decorative painting, says, "Why should we not have rooms on all principles and harmonies of colours—a Rembrandt, a Rubens, a Titian, and a Paul Ve-

* Webb's Inquiry, &c.

ronese—with the furniture and ornaments corresponding to the character and tone of the apartment? I would extend it even to the introduction of flowers of a suitable colour and character. Lucullus' hall of Apollo would grow dim before a saloon of Titian."

This would certainly be a great refinement in decoration, and is worthy of the particular attention of those engaged in such matters. But how much more practically easy would it be for the designer of the pattern of a carpet, a shawl, or such other variously coloured article, to adopt the hint? Yet it ought always to be kept in mind, that the studying or copying of pictures, in any way, is merely an auxiliary, and that anything like an approximation to perfection in ornamental designs or colouring, can only be attained by having recourse to Nature herself, "who," as Sir Joshua Reynolds says, "is always at hand; and, in comparison of whose rules, the best coloured pictures are but faint and feeble."

THE END.



room—with the furniture and ornaments corresponding to the character and taste of the apartment? I would almost as soon see the house decked with flowers of a suitable colour and character. Lilies of the valley of Apollo would grow dim before a school of Titian."

This would certainly be a great refinement in decoration, and is worthy of the particular attention of those engaged in such matters. But how much more practically easy would it be for the designer of the pattern of a carpet, a shawl, or such other variously coloured article, to adopt the hint? Yet it ought always to be kept in mind, that the studying or copying of pictures, in any way, is wholly an auxiliary, and that anything like an approximation to perfection in ornamental design or colouring, can only be attained by having recourse to Nature herself. "who," as Sir Joshua Reynolds says, "is always at hand; and, in imitation of whose rules, the best coloured pictures are but poor and feeble."

THE END.

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